

17MP GMSL3 CAMERA

GENERAL DESCRIPTION

The camera module adopts SONY CMOS image sensor (IMX735) and Maxim GMSL3 serializer (MAX96793) to develop and design. It conforms to the performance of the vehicle specification and has a high-quality image effect after professional image debugging; And equipped with M21/AA on-board specifications lens, the module as a whole can reach IP64 protection level.



KEY PARAMETERS

| | |
|-----------------------|-------------------------------------|
| Sensor | SONY 17.42MP IMX735 RGGB |
| ISP | / |
| Image Size | 1/1.17 inch CMOS |
| Output Pixels | 3000x5760 3000x4000 2160x3840 |
| Pixel Size | 2.1um*2.1um |
| Frame Rate | Max 45fps |
| HDR Support | Yes |
| LFM | Yes |
| Output data | MIPI / RAW 12 |
| Serializer | Maxim Max96793 |
| Camera Interface | GMSL3 |
| Power Supply | 9~16V POC |
| Current | <400mA@12VDC |
| Connector | TE (MATE-AX 2-2380600-1) |
| Operating temp. range | -40~+85°C |
| Dimensions | W: 40mm, L:40mm, H:37.3mm |
| Weight | <120g |

Features

- Output RAW data
- Comply with vehicle regulations protection class
- External trigger support
- Multi-camera synchronization is supported
- Supports different focal length lenses

Application

- Automotive
- ADAS + Viewing Fusion
- High Dynamic Range Imaging
- Autonomous Driving
- Robots





HARDWARE SETTING

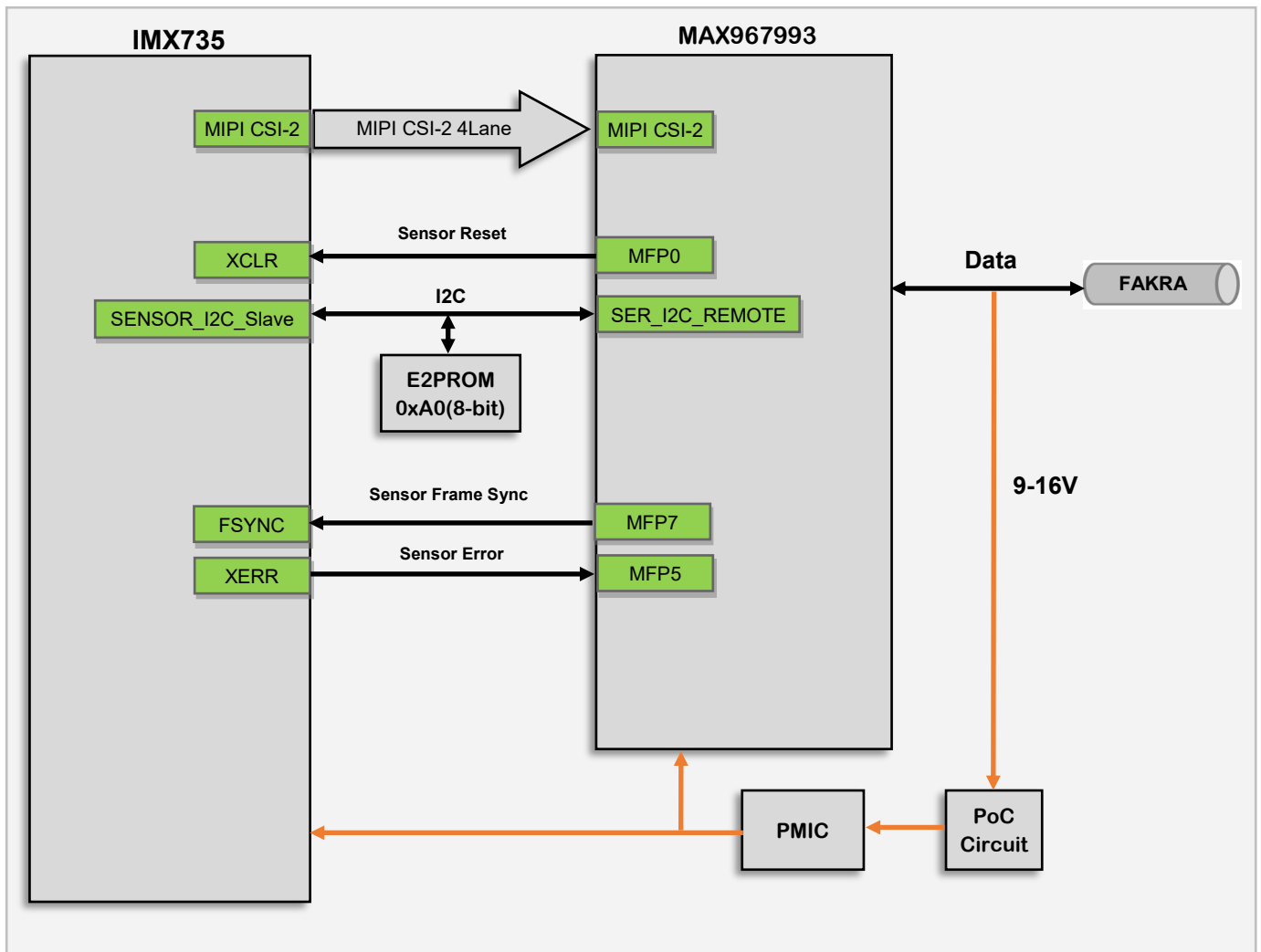
| Serializer | |
|-------------|--------------------|
| Model | MAX96793 |
| I2C Address | 0x80(8bit address) |
| Rate | GMSL3 (12G bps) |

| Sensor | |
|-------------|-----------------------------|
| Model | IMX735 |
| I2C Address | 0x34 (8bit address) |
| Frame Sync | Controlled by MAX96793 MFP7 |
| Reset | Controlled by MAX96793 MFP0 |
| Error | Controlled by MAX96793 MFP5 |





BLOCK DIAGRAM



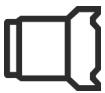
Block Diagram

※ The camera module has no ISP and outputs RAW data. The back end needs to be configured with image sensor and SerDes;

※ For SerDes setting code, please contact Sales@sensing-wolrd.com ;

※ Support store camera internal parameters, if you need to obtain the internal parameters reading method, please note before placing the order;



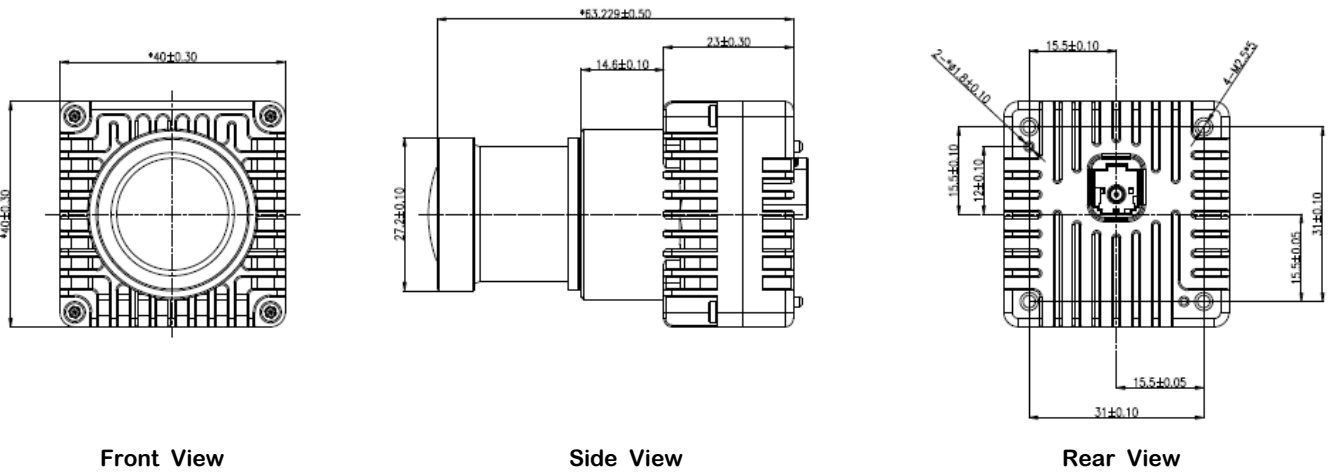


MODEL AND LENS

| Model | HFOV | VFOV | F.No | EFL | Max Optical Distortion | Class of protection | Lens |
|-------------------------|------|-------|------|--------|------------------------|---------------------|------|
| SG17-IMX735C-G3A-H20MA | 24° | 16.2° | 1.6 | 29.3mm | 0.041% | IP64 | AA |
| SG17-IMX735C-G3A-H100MA | 96° | 47° | 1.6 | 7.26mm | -37.9% | IP64 | AA |
| SG17-IMX735C-G3A-H190MA | 185° | 173° | 2.0 | 2.14mm | -116.9% | IP64 | AA |

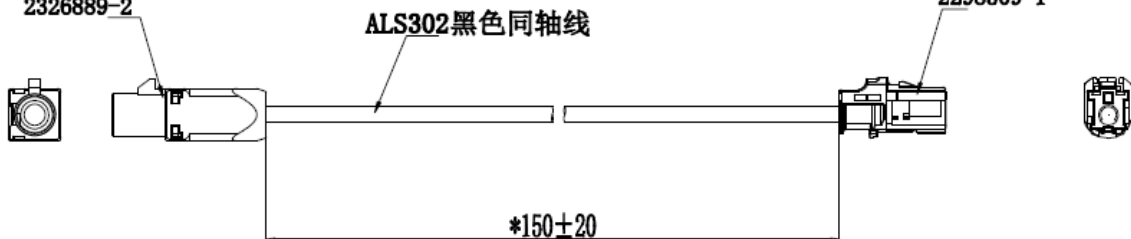


DIMENSIONS



FAKRA Z 水蓝色公头
TE: 2-2326914-0
TE: 2326897-1
TE: 2326890-8
2326894-2
2326889-2

母端子护套A扣
TE: 2310137-1
2298496-1
2298494-1
2298509-1



Note:

The height of this module varies when matching different lenses. Please refer to 3D digital analog size for details. Camera accessories include 1 Fakra adapter cable, the specific dimensions refer to the figure above.



This icon indicates the imaging direction is positive.





PLATFORMS SUPPORT

| Platforms | Product Link |
|--|---|
| <p>NVIDIA Jetson platforms</p>  | <p>Provide development driver package</p> <p>https://www.sensing-world.com/jetson_camera_ecosystem/</p>  |





ACCESSORIES

◇ Coaxial Cable

| 产品名称 | 产品型号 | 规格 |
|--|--------------------|--|
| Mini-fakra Coaxial Cable 4-in-1(Rosenberg) | R4JC-JC-ZZZZ-0500L | Mini-fakra, 4 in 1, 0.5m, Female to Female |
| Mini-fakra Coaxial Cable 4-in-1 (TE) | T4JC-PC-ZZZZ-0500A | Mini-fakra, 4 in 1, 0.5m, Male to Female |
| Mini-fakra Coaxial Cable 4-in-1(Rosenberg) | R4JC-PC-ZZZZ-0500L | Mini-fakra, 4 in 1, 0.5m, Male to Female |
| Mini-fakra Coaxial Cable 4-in-1 (TE) | T4JC-JC-ZZZZ-0500A | Mini-fakra, 4 in 1, 0.5m, Female to Female |
| Camera coaxial Cable | SG-JSZPSZ2000L | 2M, Male to Female, IP67 |
| Camera coaxial Cable | SG-JSZJSZ2000L | 2M, Female to Female, IP67 |
| Camera coaxial Cable | SG-JSZPSZ3000L | 3M, Male to Female, IP67 |
| Camera coaxial Cable | SG-JSZJSZ3000L | 3M, Female to Female, IP67 |
| Camera coaxial Cable | SG-JSZPSZ5000L | 5M, Male to Female, IP67 |
| Camera coaxial Cable | SG-JSZJSZ5000L | 5M, Female to Female, IP67 |
| Camera coaxial Cable | SG-JSZJSZ7000L | 7M, Female to Female, IP67 |
| Camera coaxial Cable | SG-JSZJSZ8000L | 8M, Female to Female, IP67 |
| Camera coaxial Cable | SG-JSZPSZL100L | 10M, Male to Female, IP67 |
| Camera coaxial Cable | SG-JSZJSZL100L | 10M, Female to Female, IP67 |
| Camera coaxial Cable | SG-JSZJSZL120L | 12M, Female to Female, IP67 |
| Camera coaxial Cable | SG-JSZJSZL160L | 16M, Female to Female, IP67 |
| Camera coaxial Cable | SG-JSZJSZL200L | 20M, Female to Female, IP67 |





Revision History

| Version | Description | Release date |
|---------|---------------|--------------|
| Rev1 | First Release | 2025.01 |

